

## Claims

1. A process for preparing solid ammonium glyphosate by extraction with an organic solvent, which comprises adding glyphosate  
5 and water into a normal reactor, introducing gaseous ammonia for the reaction to obtain the aqueous ammonium glyphosate solution after the reaction is completed, characterized in that an organic solvent is added into the reaction solution, wherein said organic solvent has a relatively high solubility in water or is miscible with water in any  
10 proportion, and the solid ammonium glyphosate is obtained by crystallizing and filtering in suction.

2. The process according to claim 1 for preparing the solid ammonium glyphosate by the extraction with said organic solvent, characterized in that said organic solvent contains an acetal,  
15 monobasic alcohol having 1-4 carbon atoms, or a mixture thereof.

3. The process according to claim 1 for preparing the solid ammonium glyphosate by the extraction with said organic solvent, characterized in that said organic solvent may be an acetal, or monobasic alcohol having 1-4 carbon atoms, or a mixture thereof.

20 4. The process according to claim 2 or 3 for preparing the solid ammonium glyphosate by the extraction with said organic solvent, characterized in that said monobasic alcohol having 1 - 4 carbon atoms may be methanol, ethanol, propanol or n-butanol, and said acetal may be methylal, wherein the above may be used alone or as a mixture of  
25 thereof.

5. The process according to claim 2 or 3 for preparing the solid ammonium glyphosate by the extraction with said organic solvent, characterized in that the weight ratio of the added organic solvent to water content in the system is 1:1-10:1.

30 6. The process according to claim 2 or 3 for preparing the solid ammonium glyphosate by the extraction with said organic solvent, characterized in that the weight ratio of the added organic solvent to

water content in the system is 2:1-5:1.

7. The process according to claim 1 for preparing the solid ammonium glyphosate by the extraction with said organic solvent, characterized in that said reactant glyphosate is an undried power  
5 having a water content of 5-20%, or a dry powder having a glyphosate content more than 90% by weight, and the weight ratio of the glyphosate to water added in the system is 0.2-2:1.

8. The process according to claim 1 for preparing the solid ammonium glyphosate by the extraction with said organic solvent,  
10 characterized in that the mole ratio of ammonia to the glyphosate added is 1.01:1-1.5:1.

9. The process according to claim 1 for preparing the solid ammonium glyphosate by the extraction with said organic solvent, characterized in that the reaction temperature is 30-100°C and the pH  
15 in the system is 5-8 at the end of reaction.

10. The process according to claim 1 for preparing the solid ammonium glyphosate by the extraction with said organic solvent, characterized in that the solid ammonium glyphosate obtained from filtration is further dried to make the content of water and organic  
20 solvent therein decreased to less than 0.1-2%.

11. The process according to claim 1 for preparing the solid ammonium glyphosate by the extraction with said organic solvent, characterized in that the mother liquor containing organic solvent is separated by rectification or distillation after separating out solid, and  
25 the resulting organic solvent is returned for using in the crystallization, and the aqueous solution containing ammonium glyphosate is returned back to the reaction process.

12. The process according to claim 1 for preparing the solid ammonium glyphosate by the extraction with said organic solvent,  
30 characterized in that the residue after rectification is used for preparing the aqueous formulation of ammonium glyphosate salt.